

In The Claims

Please amend claim 1 as follows:

1. (Amended) In a process for producing a product using a material which is electrochemically loaded with an isotopic fuel, a method of controlling the loading which includes in combination:

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loading said isotopic fuel into said material,
then providing means for producing a change in the quantity of said isotopic fuel within said material,
creating thereby a catastrophic diffusion flux of said isotopic fuel within said material,
providing a diffusion barrier to said diffusion flux of said isotopic fuel within said material,
means thereby producing said product.

Please amend claim 3 as follows:

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3. (Amended) A method as in claim 1 wherein said loaded isotopic fuel is a member of the group consisting of deuterium or deuterons.

Please amend claim 4 as follows:

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4. (Amended) In a process using an isotopic fuel loaded into a material, a two-stage method for controlling the loading which includes in combination:
loading said isotopic fuel into said material,
then providing means for producing a change in the quantity of said isotopic fuel within said material,
creating thereby a catastrophic diffusion flux of said isotopic fuel within said material.

Please amend claim 6 as follows:

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6. (Amended) A method as in claim 4 wherein loaded isotopic fuel is a member of the group consisting of deuterium or deuterons.

Please amend claim 8 as follows:

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8. (Amended) A method as in claim 4, where the said means to produce a change in the quantity of said isotopic fuel within said material is by a change in temperature of said material.

Please amend claim 12 as follows:

12. (Amended) A method as in claim 10 wherein said means of removing said product utilizes an applied spatially inhomogeneous magnetic field.

B14 Please amend claim 13 as follows:

13. (Amended) An apparatus to produce a product using a material loaded with an isotopic fuel, which includes in combination:

means to load said isotopic fuel into said material,

means to produce a change in the quantity of said isotopic fuel within said material,

means to produce a catastrophic diffusion flux of said isotopic fuel within said material,

means thereby to produce said product.

Please add claims 21 and 22 as follows:

B5 21. A method as in claim 1, where the additional step is taken of removing said product produced.

22. A method as in claim 21 wherein said means of removing said product utilizes an applied spatially inhomogeneous magnetic field.